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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,265	03/17/2005	Hideomi Koinuma	052267	2280
38834 7590 04/08/2008 WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036				
EXAMINER				
LUND, JEFFRIE ROBERT				
ART UNIT		PAPER NUMBER		
1792				
MAIL DATE		DELIVERY MODE		
04/08/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/528,265

Applicant(s)

KOINUMA ET AL.

Examiner

Jeffrie R. Lund

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 4-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I claims 1-3 in the reply filed on July 9, 2007 is acknowledged.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuller et al, US Patent 3,121,078, in view of Li, US Patent 6,911,129.

Li teaches forming a ternary phase diagrammatic system using a system that includes a first single action edge 85A with an angle of $90^\circ + \alpha$ for a first material; second single action edge 85B with an angle of $30^\circ + \alpha$ for a second material; and a

third single action edge 85C with an angle of $-30^{\circ} + \alpha$ for a third material arranged in an equilateral triangle (i.e. spaced 120° relative to each other). (Figure 9, column 8 lines 13-23)

Li differs from the present invention in that Li does not teach that the single action edges are part of a single mask that is moved in a uniaxial direction.

Li teaches a masking mechanism that includes a single mask 58 and means for moving the mask 59 in a uniaxial direction (x). (Figure 4, column 5 lines 32-60)

The motivation for combining the action edges into a single mask is to provide an alternate means of forming the action edges for use in a coating apparatus. Furthermore, it has been held that making elements integral is obvious (see *In re Wolfe* 116 USPQ 443).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the three plates of Li into a single mask as taught by Li.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuller et al, US Patent 3,121,078, in view of Li, US Patent 6,911,129.

Fuller et al teaches a mask 75 in the form of a rotating disk for depositing a layer of graduated thickness. (Figure 9, column 8 lines 5-15)

Fuller et al differs from the present invention in that Fuller et al does not teach that the mask includes a first single action edge 85A with an angle of $90^{\circ} + \alpha$ for a first material, second single action edge 85B with an angle of $30^{\circ} + \alpha$ for a second material, and a third single action edge 85C with an angle of $-30^{\circ} + \alpha$ for a third material arranged

in an equilateral triangle (i.e. spaced 120° relative to each other).

Li was discussed above and teaches a mask that includes a first single action edge 85A with an angle of $90^\circ + \alpha$ for a first material, second single action edge 85B with an angle of $30^\circ + \alpha$ for a second material, and a third single action edge 85C with an angle of $-30^\circ + \alpha$ for a second material arranged in an equilateral triangle (i.e. spaced 120° relative to each other) to deposit a ternary phase layer in a ternary phase diagrammatic system.

The motivation for forming the mask pattern of Li on the rotating disk of Fuller et al is to deposit a ternary layer containing two-dimensional relative concentration fractions of three vapors as taught by Li.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the mask pattern of Li in the rotating mask of Fuller et al.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-1437. The examiner can normally be reached on Monday-Thursday (10:00 am - 9:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrie R. Lund/

Art Unit: 1792

Primary Examiner
Art Unit 1792

JRL
3/30/08